

ARTHROSCOPIC LATARJET PROCEDURE USING FIBERTAPE CERCLAGE – CLINICAL OUTCOME WITH RETURN TO WORK AND SPORTS

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Faculty Disclosure

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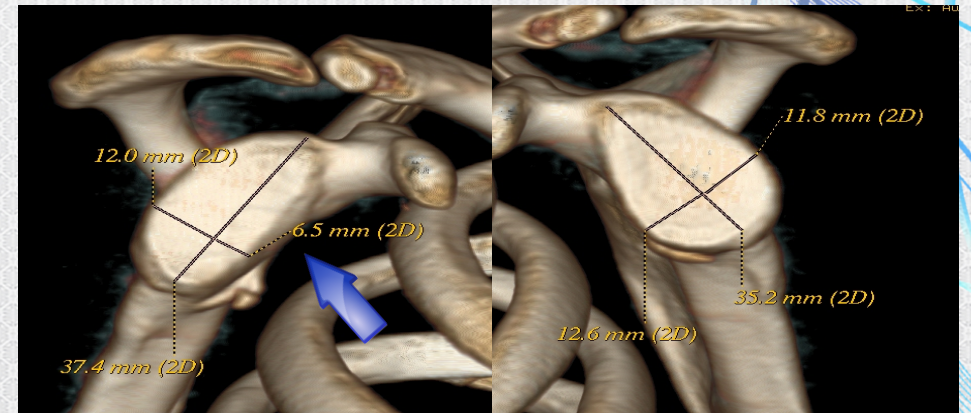
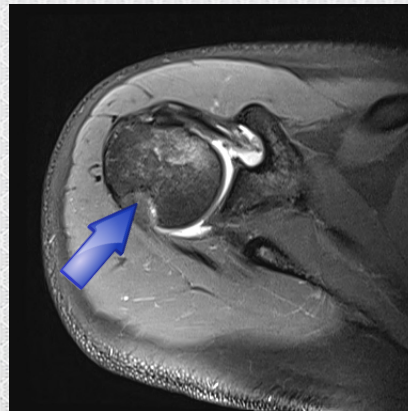
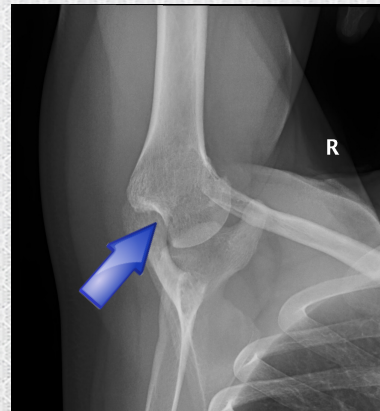


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Introduction

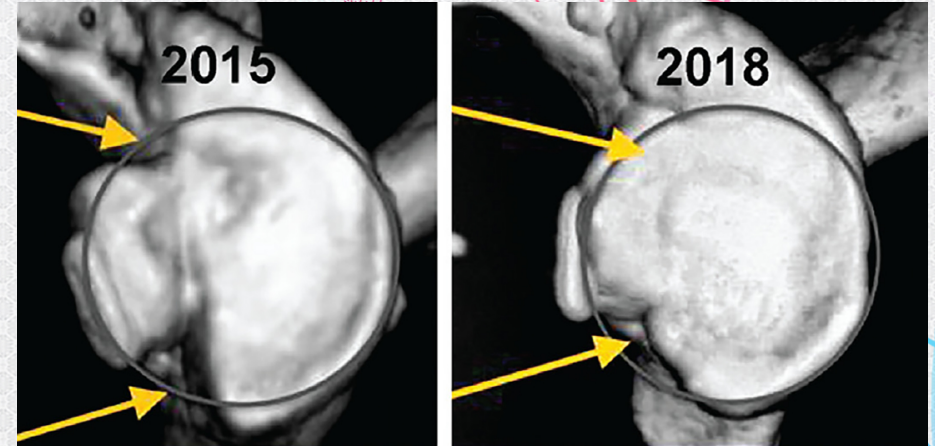
- ▶ Arthroscopic Latarjet procedure for recurrent shoulder instability with significant glenoid bone loss is gaining popularity around the world
- ▶ There are many evident advantages compared to open Latarjet procedure
- ▶ Bipolar significant bone loss



- ▶ *Objective* - To study the outcome of all-fibre Arthroscopic Latarjet procedure with capsular repair and effect on return to work and sports

Literature review

- ▶ Outcome with Fibre-tape technique
- ▶ Jian Xu et al – 152 patients
- ▶ Excellent remodelling at 3-Year Follow-up
- ▶ Absorption rate was $12.6\% \pm 4.3\%$



- ▶ The bone graft and glenoid tended to extend toward each other to form concentric circles during the *remodelling process*
- ▶ *Graft absorption* mostly occurred on the edge and outside the "best-fit" circle of the glenoid



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Methods

- ▶ *Type of study*

Prospective Observational study

- ▶ *Research Question –*

Is the clinical and radiological outcome with return to sports good after Arthroscopic Latarjet procedure using cerclage tapes?

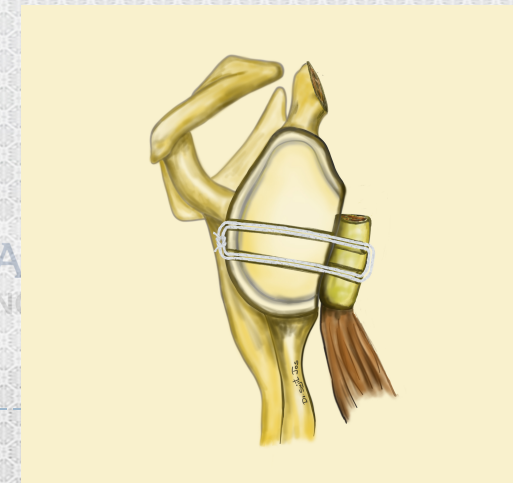
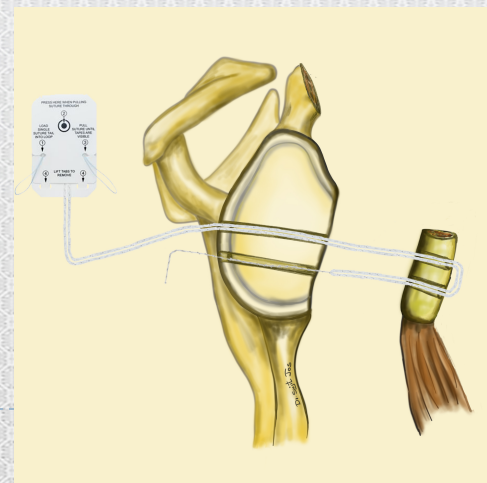
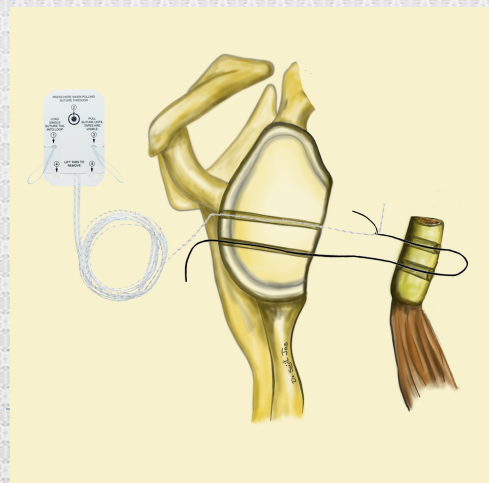
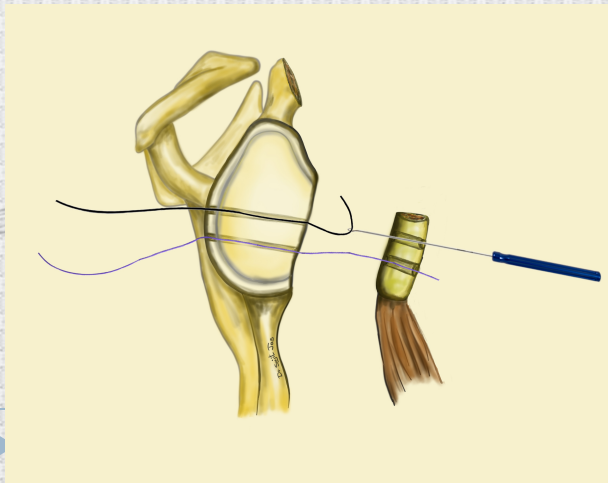
- ▶ We followed up 19 patients who underwent Arthroscopic Latarjet procedure using Cerclage tapes, along with capsular repair for a minimum period of 18 months

- ▶ Post-operative Range of motion and functional score were compared with those of the opposite shoulder - *Rowe, OSIS and UCLA* scores were used

Technique

- ▶ **Fibretape cerclage** (*Arthrex, Naples, FL*)
 - ▶ 2 ultra-high-strength sutures, creating a cerclage construct through 3mm glenoid and coracoid tunnels
- ▶ **final capsulo-labral complex reconstruction.**
 - ▶ Instability ASA (*Fibretac, Arthrex Naples, FL*) 1.6 mm x 2
 - ▶ For capsular repair

Beach Chair position



Technique

Coracoid drill guide



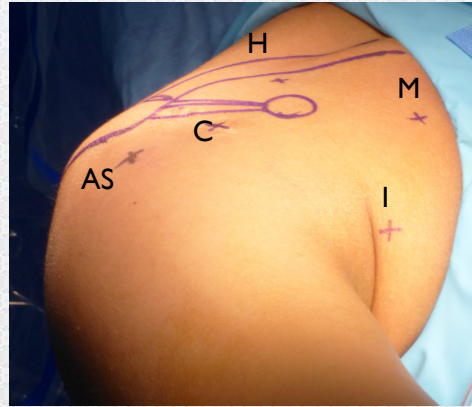
Glenoid drill guide



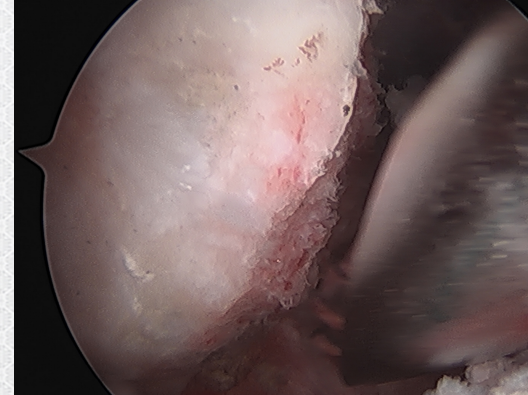
Cerclage Tape tensioner



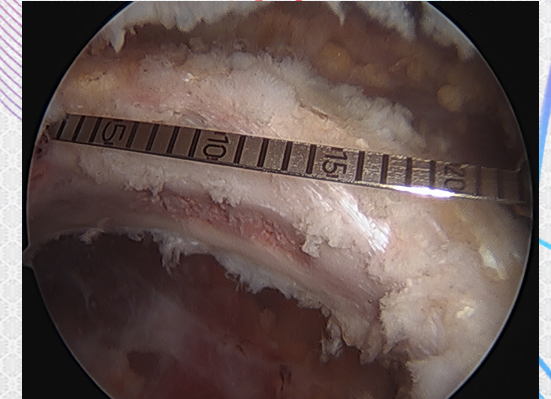
Portals



Glenoid preparation



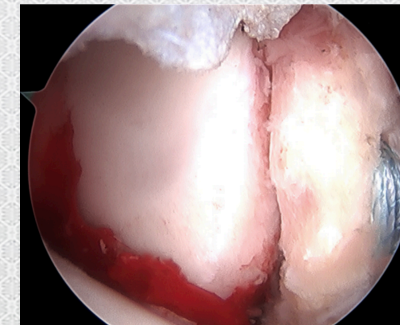
Coracoid preparation



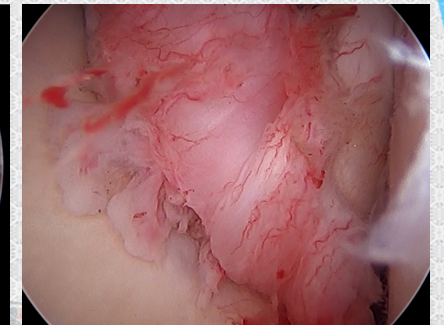
Glenoid drilling



Final fixation



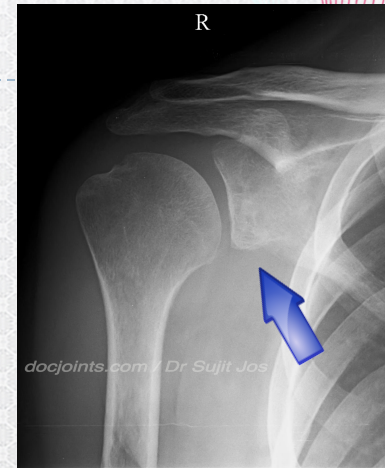
Capsular repair



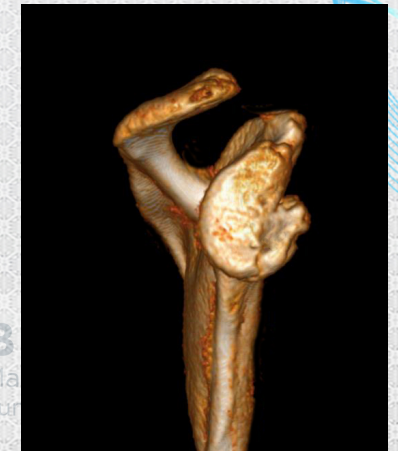
- ▶ CT scan is done at 6 months for all patients to confirm bony healing, before allowing sporting activity

Results

- ▶ 16 (84%) of the patients showed good radiographic position of the coracoid graft in the optimal subequatorial position. 3 had oblique orientation of the graft with superior end tilted medially. None had any coracoid impingement.
- ▶ 2 had fibrous union. But no signs of instability
- ▶ One patient had displaced coracoid graft and required revision surgery
- ▶ CT scan at 6 months showing bony union and graft remodeling to take the shape of native glenoid



Postop Skiagram

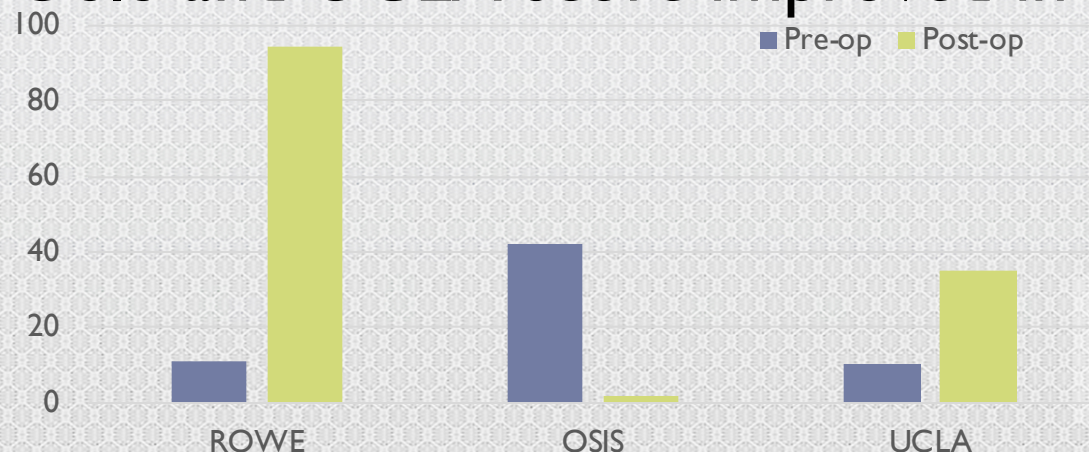


Results

► Complications

- No patient had infection or neurovascular injury
- One patient reported altered sensation over medial nerve distribution. This recovered in 3 weeks period- attributed to limb positioner
- External rotation was limited compared to contralateral shoulder for 3 patients in the first 3 months, but improved on follow-up

► The ROWE, OSIS and UCLA score improved in a statistically significant fashion



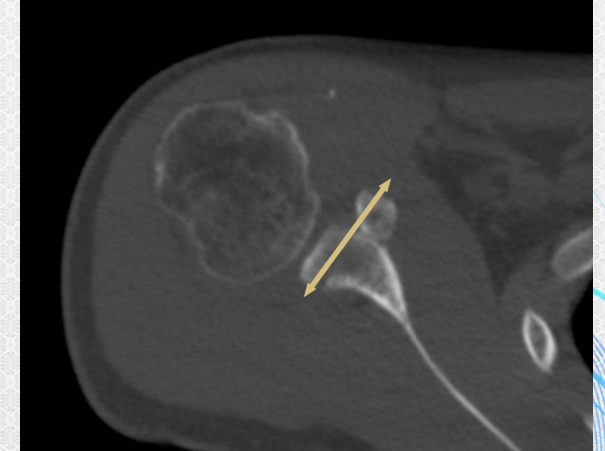
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Discussion

- ▶ Arthroscopy allowed safe identification of axillary nerve and vascular structures and prevents injuries to neurovascular structures
- ▶ There was no incidence of coracoid graft fracture on harvest
- ▶ Angle between the glenoid drill tunnel and glenoid face was assessed in CT scan. It was 10.5 deg (range 5-18 deg)
- ▶ Better than in technique involving tunnel drilling from anterior portal
 - ▶ 28.5 deg (range 12-45 deg)
- ▶ Tunnels are placed in area of glenoid with good bone stock
- ▶ All patients showed good to excellent results on follow-up



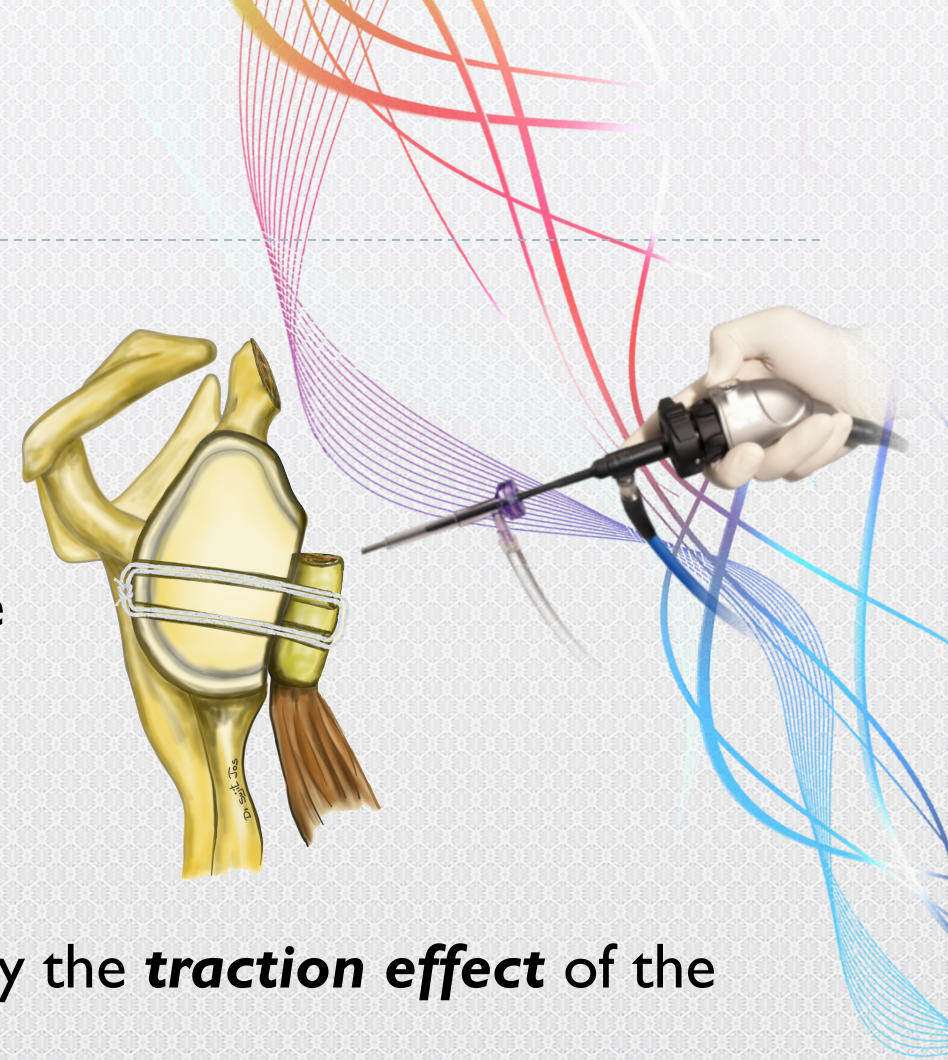
Discussion

- ▶ All surgeries were performed by a single senior orthopedic surgeon. Analysis was done by an orthopedic surgeon who was not involved in the clinical and functional evaluation. The minimum follow-up was for 18 months (range 18 – 48 months). A radiologist did the CT scan analysis of graft positioning and healing
- ▶ Limitations of the study
 - ▶ Larger sample size and multicentric studies are required to generalize the findings of the study
- ▶ Implications of the research
 - ▶ Validation of All-fibre cerclage loop technique of Arthroscopic Latarjet procedure with results comparable with the screw method, and having added advantages.

Conclusions



- ▶ All-fibre metal free method of coracoid graft fixation is a valid method for performing Arthroscopic Latarjet procedure
- ▶ This maintains all the advantages of Latarjet procedure and of arthroscopic surgery, while eliminating the screw head prominence and impingement problem even if coracoid graft undergoes osteolysis
- ▶ The placement of the coracoid graft is made simpler by the **traction effect** of the cerclage tapes when tensioned
- ▶ Concomitant anterior capsular repair **exteriorizes the coracoid bone graft**, further reducing the chance of bone wear



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